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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,894	06/14/2001	Yukio Nishimura	5988-033-27	5802

7590

10/17/2003

Supervisor, Patent Prosecution Services  
PIPER MARBURY RUDNICK & WOLFE LLP  
1200 Nineteenth Street, N.W.  
Washington, DC 20036-2412

EXAMINER
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THORNTON, YVETTE C

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 10/17/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-7

**Office Action Summary**

Application No.

09/879,894

Applicant(s)

NISHIMURA ET AL.

Examiner

Yvette C. Thornton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27 is/are allowed.
- 6) ☒ Claim(s) 1-4, 12, 13, 15-17, 20, 21, 23-26 and 28-31 is/are rejected.
- 7) ☒ Claim(s) 5-11, 14, 18, 19 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

This is written in reference to application number 09/879894 filed on June 14, 2001 and published as U.S. 2002/0009668 on January 24, 2002.

#### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### *Response to Amendment*

2. Claims 17-31 are newly added. Claims 1-31 are currently pending.
3. The declaration filed under 37 CFR 1.132 by inventor Hiroshi Ito is sufficient to overcome the rejection set forth under 35 USC 102(f).
4. The English translation of the Japanese priority documents JP 2001-108824 and 2000-182297 is sufficient to perfect the foreign priority dates of April 6, 2001 and June 6, 2001, respectively.

#### *Claim Rejections - 35 USC § 112*

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 23-26 and 28-31 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for unsaturated nitrile compounds such as (meth)acrylonitrile,  $\alpha$ -chloroacrylonitrile, crotonitrile, maleinitrile, fumaronitrile, mesaconitrile, citraconitrile and itaconitrile (pg. 59 of the present specification), does not

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reasonably provide enablement for the structure (H)(R1)C=C(R2)(CN) as set forth in the said claims. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims. The compounds listed in the specification do not provide ample support for the structure presented in the instant claims.

### *Double Patenting*

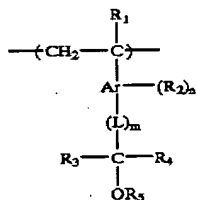
7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-3, 12-13, 17 and 20-21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 37 and 41-43 of U.S. Patent No. US 6610456 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because both inventions pertain to a photoresist composition comprising an acid generator and a polymer having a recurring unit containing a fluorinated substituent. The prior art teaches a monomer of formula (III) having the

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structure

wherein  $R_3$  is a fluorinated alkyl;  $R_4$  is H, alkyl or fluorinated alkyl;

and  $R_5$  is H, alkyl, protected hydroxyl,  $-\text{C}(\text{O})\text{R}_8$ ,  $-\text{CH}_2-$ ,  $\text{C}(\text{O})\text{OR}_8-$ ,  $-\text{C}(\text{O})\text{OR}_9-$  or  $-\text{SiR}_{10}-$ . The prior art further claims that the photoresist composition further comprises at least one additive such as an acid diffusion controlling agent and that the said acid generator is an onium salt. It would have been obvious to one of ordinary skill in the art, in light of the claimed invention of US 2002/0164538 A1, to make a photoresist composition comprising (1) a copolymer having a structure represented by  $-\text{CR}_3\text{R}_4\text{OR}_5$  wherein  $R_3$  is a fluorinated alkyl;  $R_4$  is H, alkyl or fluorinated alkyl; and  $R_5$  is H, alkyl, protected hydroxyl,  $-\text{C}(\text{O})\text{R}_8$ ,  $-\text{CH}_2-$ ,  $\text{C}(\text{O})\text{OR}_8-$ ,  $-\text{C}(\text{O})\text{OR}_9-$  or  $-\text{SiR}_{10}-$ ; (2) an acid generator which is an onium salt; and (3) at least one additive such as an acid diffusion controlling agent. One of ordinary skill would have a reasonable expectation of success in preparing a composition with the claimed components of the invention of US 2002/0164538 A1.

9. *The examiner notes that this rejection has been changed to a non-provisional rejection because the copending application 09/794466 (US 2002/0164538 A1) has been issued as US Patent No. 6610456 B2.*

#### *Response to Arguments*

10. In regard to the double patenting rejection of record, applicants argue that the "legal title" of to the copending application 09/794466 (now US 6610456 B2) is different than the "legal title" of the present application. Therefore a terminal disclaimer is not appropriate.

The examiner assumes that the term "legal title" is in reference to the ownership/assignment of the said applications. The MPEP has established that "double patenting may exist between an issued patent and an application filed by the same inventive entity, or by an inventive entity having a common inventor with the patent, and/or by the owner of the patent" (see MPEP 804(I)(A)). Although the ownership of the pending application and the copending application 09/794466 (now US 6610456 B2) is different, the double rejection is proper because both application have a common inventor. Furthermore, the declaration filed by the Hiroshi Ito supports the issue of common inventorship. A terminal disclaimer is appropriate. Absent a terminal disclaimer, the rejection is maintained.

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

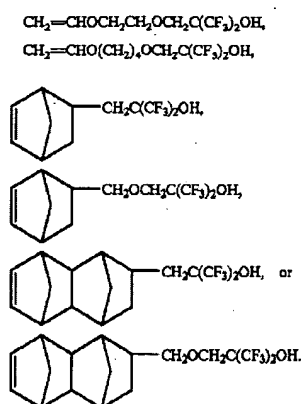
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

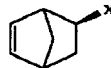
12. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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13. Claims 1-4, 12 and 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Fryd et al. (US 6503686 B1). Fryd claims a photoresist composition containing a nitrile/fluoroalcohol copolymer and a photoactive component (cl. 1) wherein the fluoroalcohol repeating unit is derived from a monomer having the structural formula:



(cl. 31). It is the examiner's position that monomer 3 of said group of formulae (cl. 31) meets the limitations of claimed formula (2) wherein  $R_1$  is hydrogen and  $m=1$ .

Fryd exemplifies in example 15 a composition comprising a polymer of acrylonitrile/norbornylenehexafluoroalcohol/tertiarybutyl methacrylate (65/22/13); a t-butyl lithocholate as the dissolution inhibitor; and triphenylsulfonium nonaflate as the photoacid generator (c. 28, l. 25-61). Norbornylhexafluoroalcohol has the structure  wherein X is  $\text{OCH}_2\text{C}(\text{CF}_3)_2\text{OH}$  (c. 15). See also examples 4, 5 and 7.

### *Response to Arguments*

14. Applicant's arguments filed in regard to the instant claims have been fully considered but they are not persuasive. Applicants argue that the perfection of the foreign priority dates overcomes the rejection of Fryd. While the examiner agrees that the filing date of Fryd is

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later than the foreign priority dates, the examiner is of the position that the provisional date of Fryd, (November 17, 1999) still meets the requirement for a 102(e) rejection (see MPEP 706.02). The rejection is maintained.

15. The rejection over the prior art references of Dammel (US 2002/0187419 A1), Allen (US 2002/0164538 A1) and Hatakeyama (US 2002/0004569 A1) are hereby withdrawn because the filing date in each of these references is not longer applicable under 35 USC 102(e).

*Allowable Subject Matter*

16. Claim 5-11, 14, 18-19 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

17. The following is a statement of reasons for the indication of allowable subject matter: review of the prior art failed to teach and/or disclose (1) a copolymer having recurring unit (I) and recurring unit (II) as set forth in the instant claims 5-6 and 9-10; (2) monomer of formula (4) in combination with monomers (I) and (II) wherein formula (4) has a group  $-\text{COO}-\text{C}(\text{R}_7)_3$  selected from the group presented in instant claim 8; (3) a recurring unit (IV) as in instant claim 11; and (4) a recurring unit (I) represented by formula (2) as set forth in instant claims 19 and 22.

18. Claim 27 is allowed.

19. The following is an examiner's statement of reasons for allowance: review of the prior art failed to teach and/or suggest a composition comprising a resin having a recurring unit represented by the claimed formula (6) of instant claim 27.



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20. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*Conclusion*

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

22. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvette C. Thornton whose telephone number is 703-305-0589. The examiner can normally be reached on Monday-Thursday 8-6:30.


24. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet C. Baxter can be reached on 703-308-2303. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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25. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1495.

ycf  
October 15, 2003

  
JANET BAXTER  
SUPERVISORY PATENT EXAMINER  
CENTER 1700